

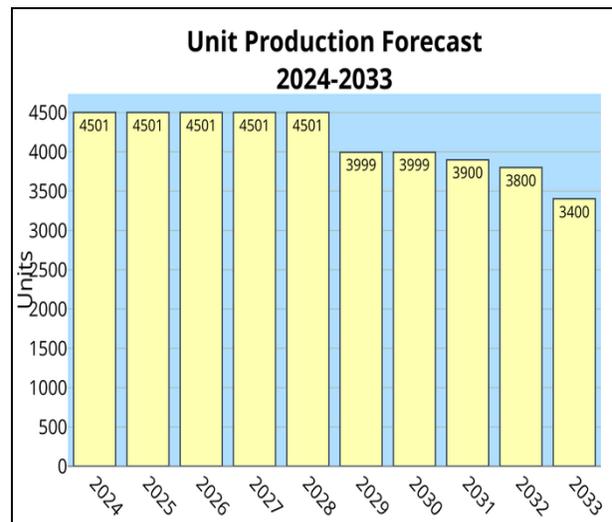
# ARCHIVED REPORT

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## MBT LAW/NLAW

### Outlook

- Serial production for British Army procurement commenced in 2005; large production order for the British Army worth SEK2.9 billion placed in December 2022
- Sweden placed initial order in December 2005; Swedish Defence Materiel Administration continues to purchase the weapon with a recent order in December 2022
- Well-publicized effectiveness of NLAW in Ukraine against Russian armor may enhance sales potential; France is considering introducing the NLAW into service to bridge the gap for its own next-generation anti-tank weapon
- Forecast reflects anticipated continuing production for U.K. and Sweden, as well as export sales



### Orientation

**Description.** A man-portable anti-armor weapon.

**Analyst Note.** The MBT LAW is also known as the NLAW (Next generation Light Anti-tank Weapon). In this report, the Forecast International Weapons Group uses MBT LAW in reference to the overall program, and NLAW for the actual production weapon systems.

**Sponsor.** Saab Dynamics sponsors development of the MBT LAW as a private venture.

The U.K. Defence Procurement Agency (DPA) and the Swedish Defense Materiel Administration (FMV) have thus far sponsored procurement.

**Status.** Serial production.

**Total Produced.** Through 2022, we estimate that Team MBT LAW produced approximately 107 MBT LAW developmental prototype weapons and at least 109,800 production NLAW weapons.

**Application.** A man-portable, shoulder-fired, light anti-armor weapon.

**Price Range.** In 2023 U.S. dollars, the NLAW reportedly carries a unit price between \$30,000 and \$40,000 for each complete system (launcher, sighting mechanism, and one munition).

**MBT LAW/NLAW****Contractors****Prime**

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<b>Thales UK</b>	<a href="https://www.thalesgroup.com">https://www.thalesgroup.com</a> , Alanbrooke Rd, Castlereagh, Belfast, Northern Ireland, United Kingdom, Tel: + 44 0 2890 465 200, Fax: + 44 0 2890 465 201, Second Prime

**Subcontractors**

<b>EPS Logistics Technology Ltd</b>	<a href="https://www.epslt.co.uk">https://www.epslt.co.uk</a> , 152 Staplehurst Rd, Sittingbourne, Kent, United Kingdom, Tel: + 44 1795 424433, Fax: + 44 1795 436035, Email: <a href="mailto:sales@epslt.co.uk">sales@epslt.co.uk</a> , (MBT LAW Mmunition Container)
<b>Eaton Aerospace Ltd, Fuel &amp; Motion Control Systems Division</b>	<a href="https://www.eaton.com">https://www.eaton.com</a> , Abbey Park, Titchfield, Fareham, Hampshire, United Kingdom, Tel: + 44 1329 853000, Fax: + 44 1329 853797, (Control Fins and Actuators)
<b>Leafield Group Ltd, Leafield Engineering Ltd</b>	<a href="https://www.leafield.co.uk">https://www.leafield.co.uk</a> , Leafield Way, Corsham, Wiltshire, United Kingdom, Tel: + 44 1225 810771, Fax: + 44 1225 810614, Email: <a href="mailto:lel@leafield.co.uk">lel@leafield.co.uk</a> , (HE Processing)

Contractors are invited to submit updated information to Editor, International Contractors, Forecast International, 75 Glen Road, Suite 302, Sandy Hook, CT 06482, USA; [rich.pettibone@forecast1.com](mailto:rich.pettibone@forecast1.com)

**Technical Data**

**Dimensions.** The weight data reflect the complete weapon, with sight.

	<u>SI Units</u>	<u>U.S. Units</u>
Weapon length	1.03 m	3.37 ft
Weapon caliber	84 mm	3.31 in
Weapon weight	11.6 kg	35.52 lb
Projectile weight	Unknown	Unknown

**Performance.** The following data are provisional. The armor perforation data reflect application of our standardized formula. In the following table, the muzzle velocity figure in parentheses is the maximum velocity.

	<u>SI Units</u>	<u>U.S. Units</u>
Muzzle velocity	50 (300) mps	164.04 (984.2) fps
Effective range	>600 m	>656.16 yd
Altitude	Line of sight	Line of sight
Armor perforation	72.45 cm	28.52 in

**Propulsion.** A two-stage (soft-launch/sustainer) solid rocket motor of unknown designation and performance.

**Launcher Mode.** The weapon features a disposable, composite launch tube. After firing, the operator removes the fire control unit from the disposable launch tube for reuse. The weapon operates on the same "soft-launch" technology as the Saab Bofors AT4CS.

**Control & Guidance.** The operator can employ two fire control methods:

- Optical sighting via the integral sights of the fire control unit.

- Command to line-of-sight guidance via a joystick on the fire control unit. A gas thruster in the motor of the munition provides mid-course changes in course or altitude.

**Warhead.** The initial production weapon features a High Explosive Anti-Tank (HEAT) warhead that is essentially the same as that of the BILL 2 anti-tank missile. The top attack warhead activates via a proximity fuze-type detection device, which receives inputs from an optical and magnetic sensor.

## Variants/Upgrades

**Variants.** Earlier in the program, the contractor developed a tandem shaped-charge warhead as an option for the MBT LAW. The status of this option remains unclear.

**Modernization and Retrofit Overview.** Not generally applicable. The contractor will likely integrate any product improvements as production cut-ins.

## Program Review

**Background.** In 1992, (then) Bofors began the development of the MBT LAW as a private venture.

disposable launcher and a reusable fire control unit. The MBT LAW can also fire from a bipod.

### *Modular Design*

From the start, the contractor intended the new weapon to be modular in design, utilizing off-the-shelf components. To that end, the contractor integrated the warhead technology of the BILL anti-tank missile and the launch technology of the AT4CS in the new weapon.

### *Soft-Launch Weapon*

The weapon features soft-launch technology in which an initial "push-out" charge propels the warhead from the launch tube, enabling the operator to fire the MBT LAW from within an enclosed space. After the warhead is a safe distance from the launcher, the main rocket motor ignites.

Following a series of corporate acquisitions and name changes, Saab Dynamics ultimately assumed control of the program.

### *Guided Warhead*

The normal guidance employs predicted line-of-sight technology. Once the operator acquires the target and fires the weapon, the warhead follows a constant altitude above the operator's line of sight. At the appropriate point above the target tank, a proximity fuze detonates the warhead's flat cone-shaped charge, destroying the tank from the top. Alternatively, a command to line-of-sight engagement mode enables the operator to steer the rocket via a joystick on the fire unit. A gas thruster in the motor of the munition responds to operator commands and provides mid-course changes in course or altitude.

### *Replacing the LAW-80*

In 1986, the British Defence Research Agency (DRA) began examining technology that would eventually replace the LAW-80 weapon, a product of Hunting Engineering (now INSYS). The NLAW program (New Light Anti-tank Weapon, Next Light Anti-tank Weapon, or Next-Generation Light Anti-tank Weapon, depending on the source) examined several different candidate weapons to address the LAW-80 replacement requirement. The U.K. Ministry of Defence eventually standardized this requirement as Staff Requirement (Land) 4098. By mid-1999, the DRA had narrowed the list to three contending systems:

### *Team MBT LAW in Action*

Under the terms of the development and production agreement, Saab Dynamics is continuing development of the MBT LAW in Sweden, with input from Thales and the other British subcontractors. The Thales Air Defence facility in Belfast, Northern Ireland, runs the MBT LAW serial production line. In addition to addressing the initial British Army requirement for at least 24,000 units, the Belfast facility addresses the Swedish procurement as well as any international sales.

- A version of the Dynamit Nobel Panzerfaust 3
- A new version of the Lockheed Martin Predator
- The Saab Bofors MBT LAW

All three firms had teamed up with British contractors to offer their weapons. In late 1999, the DRA short-listed the Predator and the MBT LAW as the potential LAW-80 replacements. Saab Bofors Dynamics and Thales Air Defence (formerly Shorts Missiles) formed Team MBT LAW for the final evolution of the evaluation process. In May 2002, the U.K. Ministry of Defence formally selected the MBT LAW to replace the British forces' LAW-80.

### *Dealing with ERA*

The MBT LAW warhead depends upon the top attack principle, negating the effect of most side-mounted explosive reactive armor modules. In addition, the prime contractor has developed a tandem warhead for the MBT LAW specifically to engage ERA.

**Description.** The MBT LAW is a man-portable, shoulder-fired anti-armor weapon system consisting of a

## MBT LAW/NLAW

### Funding

Saab Dynamics, in conjunction with several British subcontractors, funds development of the MBT LAW as a private venture. The U.K. MoD, through the Defence Procurement Agency (DPA), funds British Army procurement of the NLAW. The Swedish MoD, through the Defense Materiel Administration (FMV), funds Swedish Army procurement of the NLAW for the "Robot 57" program.

### Worldwide Distribution/Inventories

**Export Potential.** Saab Dynamics remains a potent force in the international anti-armor weapon market. The firm's AT4 has been a good revenue earner; the Carl Gustaf remains in wide use throughout the world. The fact that the United Kingdom and Sweden selected the MBT LAW suggests that Saab Dynamics has another strong product on the international market.

In December 2007, Finland became the first export customer for the NLAW, with deliveries commencing in 2009. In June 2010, Luxembourg became the second NLAW export customer.

**Countries.** Finland, Luxembourg, Sweden, Switzerland, Ukraine, the United Kingdom.

### Forecast Rationale

The Forecast International Weapons Group expects that regardless of the levels of procurement by Finland, Luxembourg, Switzerland and an as-yet-undisclosed export customer, the ongoing British and Swedish procurement programs alone will keep the NLAW production line active at an average annual rate of 4,500 units.

Team MBT LAW expects the weapon to achieve considerable success on the international market. While the contractors have offered the NLAW to the Netherlands, which maintains a requirement for 9,000 to 14,000 weapons of this type, we have yet to see any evidence that the Dutch have pulled the trigger on a procurement deal. Thus far, Finland, Luxembourg, Switzerland and the undisclosed customer have been the only NLAW buyers beyond Sweden and the U.K.

Nevertheless, based on the worldwide success of previous Saab man-portable anti-armor weapons, we believe that the NLAW will remain a popular item on the international market as well.

The highly publicized effectiveness of the NLAW against Russian armored fighting vehicles in Ukraine may provide a well-deserved boost to the sales potential and market status of the NLAW. Indeed, in December 2022, Saab announced a major deal with the British Ministry of Defense to supply SEK2.9 billion worth of NLAWs from 2023-2026. Another sale to Finland (SEK 400 million) was booked two months later.

French Chief of Staff General Pierre Schill stated in June 2024 that Paris plans to introduce the NLAW into service to bridge the gap until its new ACCP weapon is ready for production in the early 2030s.

### Ten-Year Outlook

ESTIMATED CALENDAR YEAR UNIT PRODUCTION												
Designation or Program	High Confidence					Good Confidence			Speculative			Total
	Thru 2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	
<b>Saab Dynamics</b>												
<b>MBT LAW Tube</b>												
	115,184	4,501	4,501	4,501	4,501	4,501	3,999	3,999	3,900	3,800	3,400	41,603
<b>Total</b>	115,184	4,501	4,501	4,501	4,501	4,501	3,999	3,999	3,900	3,800	3,400	41,603